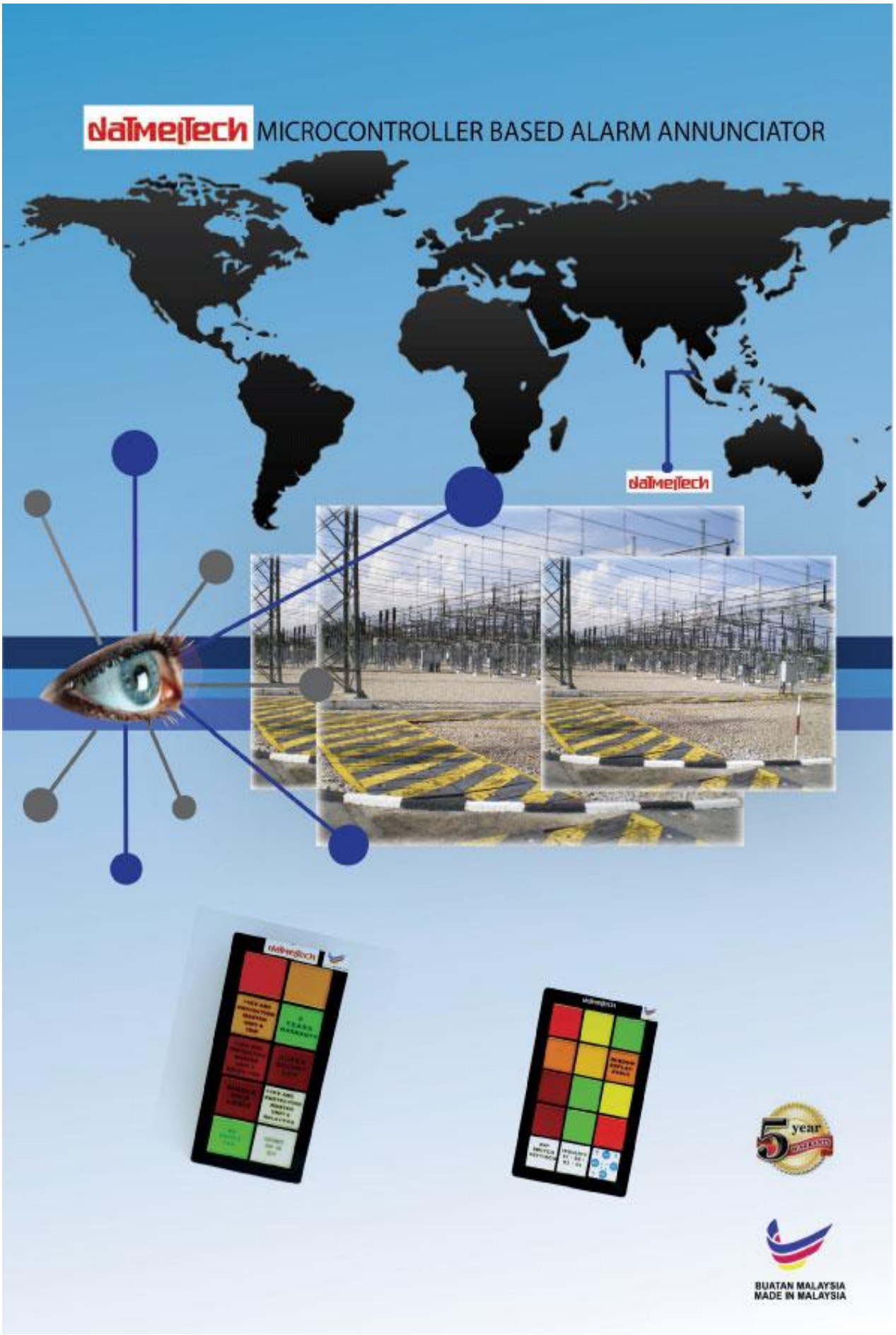

MICROCONTROLLER BASED ALARM ANNUNCIATOR
5 year
BUATAN MALAYSIA
MADE IN MALAYSIA

STANDARDS AND WARRANTY

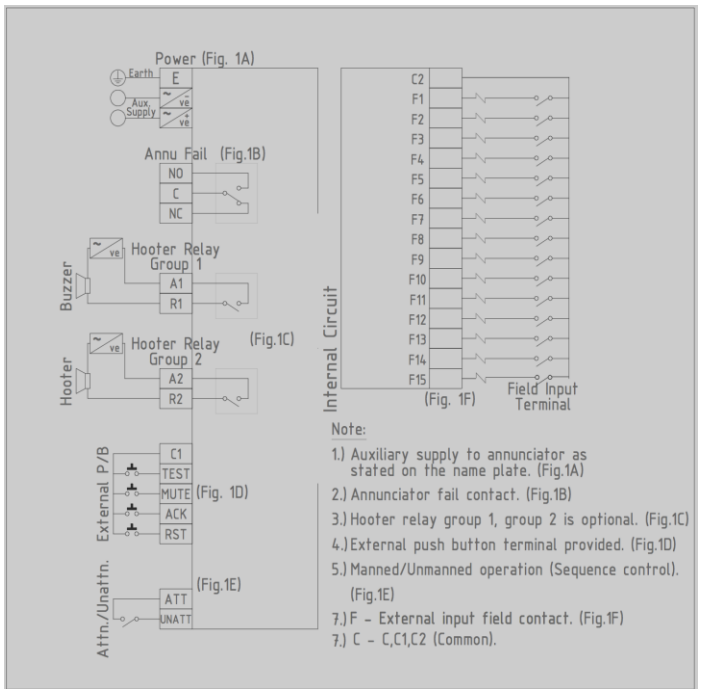
DatmelTech Alarm Annunciators is manufactured in compliance to the highest International Standards, IEC 60255-5-2000; IEC 60068-2-30:2005; IEC 60068-2-38:2009; IEC 6100-4-5:1995; IEC 60068-2-55:1987. Materials used are complied with RoHS standard and UL Marked. Stringent tests have been carried out prior to delivery and as such, DatmelTech guarantees our products for a period of five (5) years from the date of delivery against any manufacturing defects. During this period, DATMEL TECHNOLOGY SDN BHD will repair or replace the unit, limited to the Annunciator only without any charges to the client.

SYSTEM DESCRIPTION AND FEATURES

DatmelTech Annunciator is customized to customer's requirement. These units are manufactured in a range of model to suit the client's application. The user has the option to choose the desired specifications on individual model to their own requirements. DatmelTech Annunciator comes with standard integral models of minimum 12 windows in multiple of 2 windows, 15 windows in multiples of 2 windows and 16 windows in multiples of 2 windows to suit to the required windows to customer needs with or without Built in Push Button, Buzzer, Group Selection Trip / Non Trip and Self-Surveillance Watchdog. The features of the Microprocessor includes High speed low power 28/40 pin 8 Bit C MOS Flash EEPROM Microcontroller operating with wide operating voltage range from 2.0V to 5.5V Current rating of 25mA Energy saving sleep mode with watchdog timer (WDT) and chip RC oscillator. Switch mode, duel power, wide voltage, 50/60Hz SMPS which converts into regulated and filtered noise free DC output to the required voltage to CPU and IO Cards. Pluggable Technology is adapted to all serviceable parts including Terminal Block.

CABLE TERMINATION

All terminations are in two parts Pluggable Terminal Block securing the (Male) Plug to Socket (Female) with fastening screw at both ends ensuring the Plug does not fall off or having loose contact to socket. A maximum two numbers of 2.5mm sq cables crimped to two numbers flat pin cable lugs can be inserted and secured by a screw at the Terminal Block. For easy, safe maintenance and replacement of Annunciator, unscrew the screws at both ends of the Terminal Block and unplug the plug from the socket at the Annunciator.



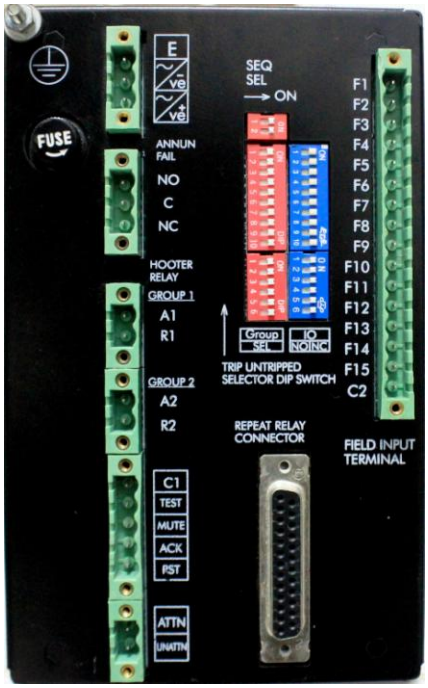
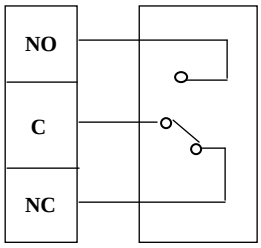


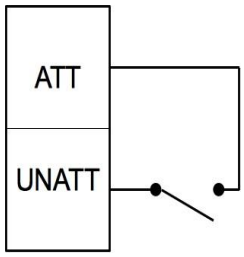
Fig. 1 Rear View of 15 Windows Annunciator

Fig. 1B ANNUCIATOR FAILURE CONTACT



During operational condition with power "ON" to the Annunciator, Contact "C" and "NO" are closed. Whenever the power fails or Annunciator malfunction contact "C" and "NC" close to indicate the Annunciator is Faulty. We can also provide with two contacts.

Fig. 1E ATTENDED OR UNATTENDED MODE

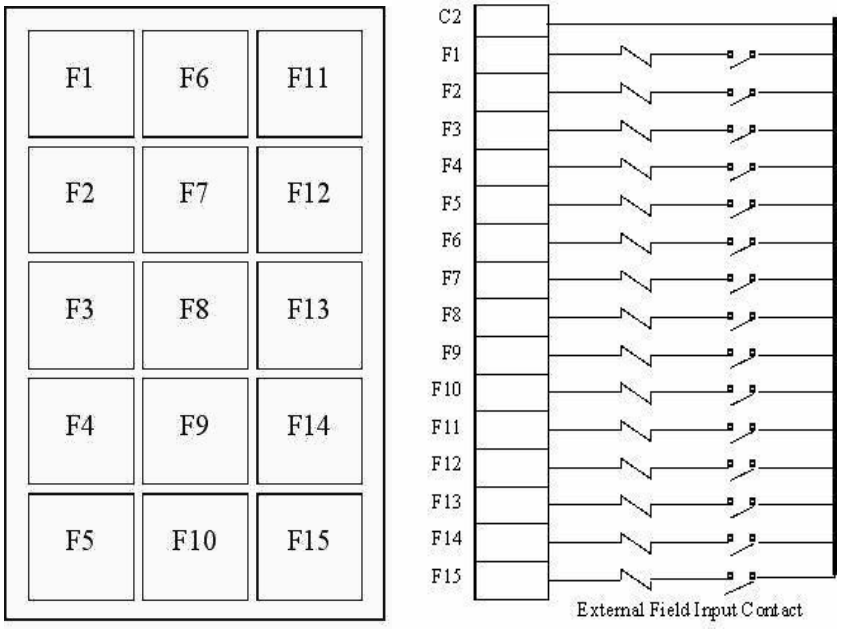


This feature enables and disables visual and audio signals. When the switch in open position (UNATTENDED), any fault occurred is registered and stored in the memory. When the switch is closed (ATTENDED), fault registered during (UNATTENDED) mode will display audio and visual signal. Hooter can be silenced by pressing the Mute Button. On pressing the Mute Button, the audio sound is silenced but the visual light will be flashing. By pressing the Acknowledge Button the flashing light will get steady. Upon clearing the fault, the Reset Button can be pressed and the steady light will go OFF and the Annunciator will go to standby mode.

REPEAT RELAY

25Pin"D"connector is used for output contact which is parallel or multiplied in additional to field contact from the Annunciator system. Repeat relay PCB cards are inbuilt type.

STANDARD ANNUNCIATOR WINDOW NUMBERS CORRESPONDING TO PLUGGABLE TERMINAL BLOCK (EXTERNAL INPUT FIELD CONTACT)



Pluggable Terminal Block

Fig. 1F Annunciator Windows Corresponding to Field Input Terminal

FACIA / BEZEL ASSEMBLY

DatmelTech Annunciator is designed with user-friendly snap fit window size of 32mm x 32mm modular construction. The desired Facia Block is accessible from the front and can be removed by using a test pen or tweezers, by inserting it in between the window and lifting it forward. The window capsule, legend & LED assembly will come out as a result. Insert the test pen in between the desired bezel and window lens, tilt it upward at the desired bezel and the lens will come out with the legend, coloured acrylic and diffuser. The legend and PCB can be removed or changed as required by hand.

LEGENDS / INSCRIPTION

Inscription of 55 alphabets 4mm 5 rows can be done by Low Relief Engraving on the reverse side of the clear window plate or on the coloured acrylic further more using a laser printer to print on paper, tracing paper or transparent film can be done as an alternative. The legends must be sandwiched in between the coloured acrylic and diffuser. Place the window plate in the bezel holder at the bottom of the bezel and press at the top. To place the window bezel in the bezel holder, insert bezel to the right hand side of the bezel holder and snap fit the window shown in Fig. 2.

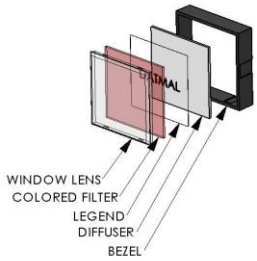
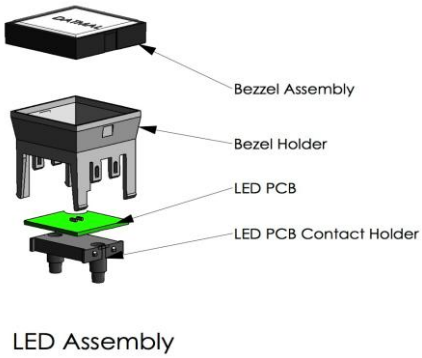


FIG. 2 Bezel Assembly

MOUNTING BEZEL ASSEMBLY TO BEZEL HOLDER

Bezel assembly has been made in such a way that you will not be able to place the assembly wrongly. The two ribs should be to the right and left hand side, and thus, making sure the positive & negative is in positioned as shown in Fig. 3.



LED ILLUMINATION

To reduce costly maintenance DatmelTech Annunciator uses super bright White SMD LEDs. Adopting latest technology off True Fit & Forget Solution. Window colours of White, Red, Yellow, Blue, Green and Orange Coloured acrylic filters are used to achieve the desired colours. However, to make it user friendly we have constructed easy replaceable LED PCB which can be removed by using your finger by lifting the ribs of the bezel holder and then removing the contact holder which houses two springs sandwiching the LED PCB to the bezel holder as shown in Fig. 3.

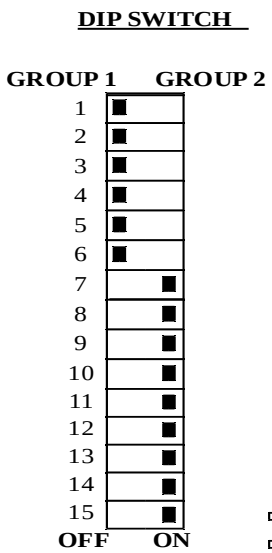
FIG. 3 Window Mounting Capsule

TESTING PROCEDURES

1. Lamp Test – Press Test Button all windows will light ‘UP’, when realise Test Button light will go ‘OFF’.
2. Sequence Test – Press Test and Acknowledge Button at same time for one second, Test Sequence will activate.

TRIP AND UNTRIP GROUP SELECTION

This feature is useful to differentiate between trip and non-trip faults, if required. Separate Hooter Relay is provided for trip and non-trip faults thus enabling differentiation. For example, we can select Group 1 (Trip) for Hooter and Group 2 (Non-Trip) for Buzzer. This grouping is used to differentiate the priority of fault dedicated at the external input field contact (Volt Free Contact). This function can be provided prior to ordering (Refer to Fig 4).



DIP Switch Position	Output Contact	Group
ON	Relay - 1	1 - Open Contact
OFF	Relay - 2	2 - Close Contact

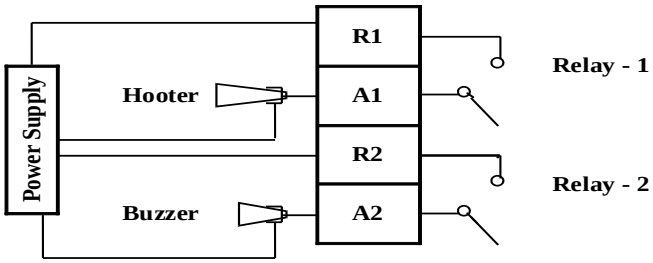
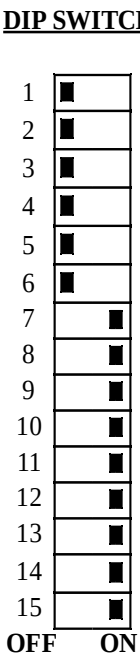


Figure 4

⇨ Power Supply should be OFF when selecting grouping.
⇨ DIP switch 1 to 6 in OFF Position, Relay-1 contact (R1 & A1) is in OPEN position. When fault is sensed at external field contact (F1 to F6), Relay-1contact (R1 & A1) is closed. Visual and Hooter will be activated.
⇨ DIP switch 7 to 15 are in ON Position, Relay-2 contact (R2 & A2) are in OPEN position. When fault is sensed at the external field contact (F7 to F15), Relay-2 contact (R2 & A2) is closed. Visual and Buzzer will be activated.

FIG. 4 TRIP/UNTRIP GROUP SELECTION

NO/NC SELECTION



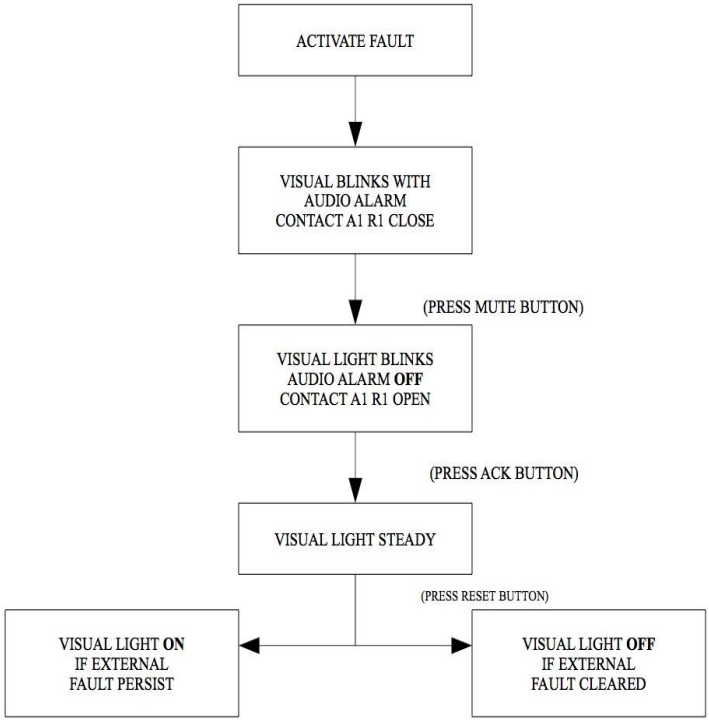
DIP Switch Position	Fault Contact Input
ON	NC
OFF	NO

⇨ Power Supply should be OFF when setting DIP Switch.
⇨ DIP switch 1to 6 in OFF position, external field contact (F1 to F6) in OPEN posititon when fault is sensed at the external field contact with Open contact becomng Closed sensed fault the Visual and Audio will be Activated.
⇨ DIP switch 7 to 15 in ON position, external field contact (F7 to F15) in Close posititon when fault is sensed at the external field contact with Close contact becoming Open position sensed fault the Visual and Audio will be Activated.

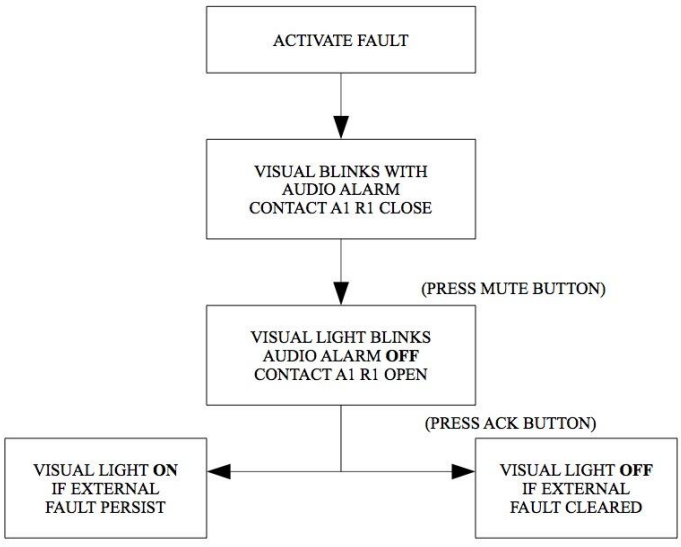
STANDARD OPERATING SEQUENCES

DatmelTech Annunciator is programmed to operate with three (3) sequences as per operating sequence confirming to Instruments Society of America (ISA). Site selectable DIP Switches are provided to select one preferred operating sequence at a time. A spare DIP Switch position is provided for any other sequence that is not provided but required by client can be ordered prior manufacturing Fig. 5. Power supply to the Annunciator must be OFF before selecting the sequence selection DIP Switch. The sequence selection DIP Switch (red colour) is located at the rear of the Annunciator.

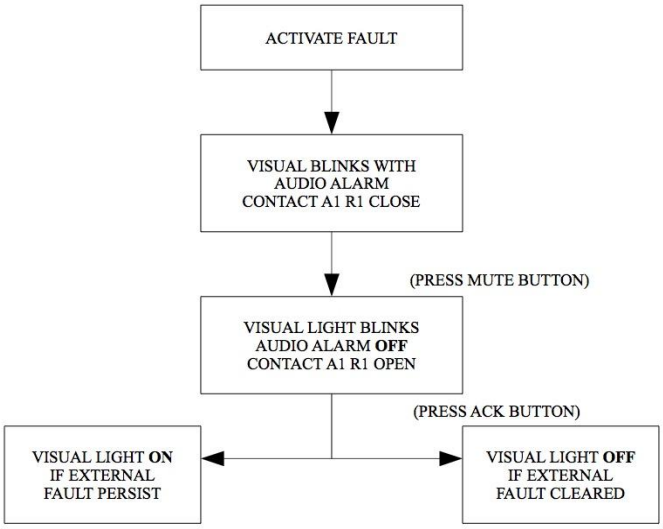
1) DIP SWITCH FOR M1 - MANUAL RESET



2) DIP SWITCH FOR A1- AUTO RESET



3) DIP SWITCH FOR F2M-1 FIRST UP



***PRESS RESET BUTTON NOT REQUIRED*

4) Fig 3 : DIP SWITCH IN SPARE POSITION FOR FUTURE USE

14 Nos Active Windows
Model No. 14WWPB/WD

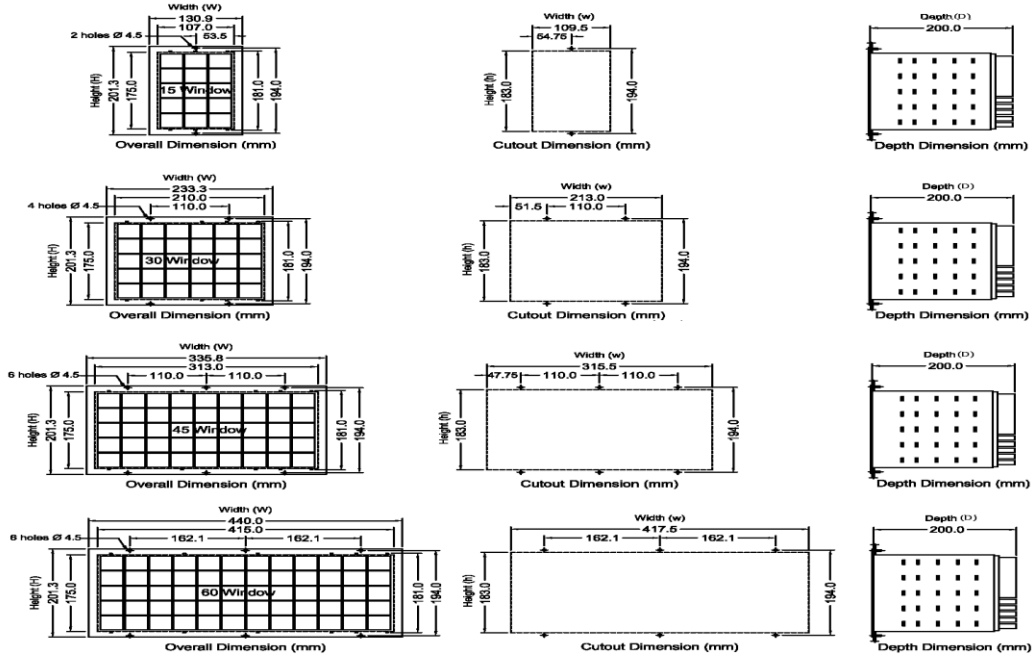
30 Nos Active Windows
Model No.: 33WWOPB

44 Nos Active Windows
Model No: 44WWPB/B

60 Nos Active Windows
Model No.: 60W WOPB

Model Number	**The First number indicates the numbers of Active Window.**
14W WPB	14 Windows With Inbuilt Push Button and Watchdog.
30W WOPB	30 Windows Without Inbuilt Push Button Watchdog.
/ BB	With In Built Buzzer.
/ RR	With Repeat Relay Facilities.
/ WG	With Grouping Selection Dip Switch.
/ IO	With IO Selection Dip Switch.

ANNUNCIATOR DIMENSION AND CUT OUT DETAILS

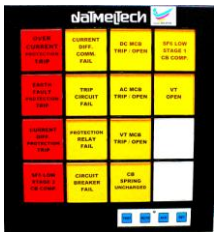


Model :- 30-110V AC/DC 90-270V AC/DC	Numbers of Active Windows	Overall Dimension Height (H) x Width (W) x Depth (D) mm	Cut out Dimension Height (H) x Width (W) mm
15 W WOPB	15	201.03x 130.09 x 200.00 (mm)	183.00 x 109.05 (mm)
16 W WPB	16	201.52x 164.96 x 200.00 (mm)	181.90 x 145.70 (mm)
30 W WOPB	30	201.03x 233.03 x 200.00 (mm)	183.00 x 213.00 (mm)
32 W WPB	32	201.52x 266.96 x 200.00 (mm)	181.90 x 247.70 (mm)
45 W WOPB	45	201.03x 335.08 x 200.00 (mm)	183.00 x 315.05 (mm)
50 W WPB	50	201.03x 233.03 x 200.00 (mm)	181.90 x 351.70 (mm)
60 W WOPB	60	201.03x 440.00 x 200.00 (mm)	183.00 x 417.05 (mm

LAMP CABINET WINDOW DIMENSION AND CUT OUT DETAILS

Voltage Supply	Number of Windows	Overall Dimension Height (H) x Width (W) x Depth (D) mm	Cutout Dimension Height (h) x Width (w)mm
>12/24 VDC >48/60 VDC >110 VDC	10	201.3 x 95.0 x 70.0 (mm)	181.0 x 73.0 (mm)
	20	201.3 x 165.0 x 70.0 (mm)	181.0 x 143.0 (mm)
	30	201.3 x 233.0 x 70.0 (mm)	181.0 x 211.0 (mm)
	40	201.3 x 278.0 x 70.0 (mm)	181.0 x 279.0 (mm)

24 Nos Active Windows
Model: IP 24 WPB/WSS

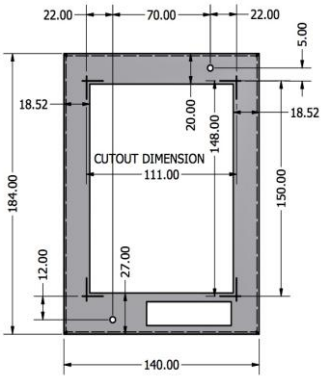


16 Nos Active Windows
Model: IP 16 WPB/WSS

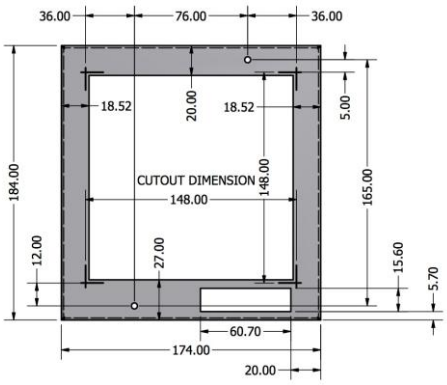
Model Number.	The First Number Indicates the Numbers of Active Windows
IP 12 WOPB/	12 Windows without Inbuilt Push Button and Watchdog LED.
IP 12 WPB/	12 Windows with Inbuilt Push Button and Watchdog LED.
IP 16 WOPB/	16 Windows without Inbuilt Push Button and Watchdog LED.
IP 16 WPB/	16 Windows with Inbuilt Push Button and Watchdog LED.
IP 24 WOPB/	24 Windows without Inbuilt Push Button and Watchdog.
IP 24 WPB/	24 Windows with Inbuilt Push Button and Watchdog.
IP 32 WOPB/	32 Windows without Inbuilt Push Button and Watchdog.
IP 36 WPB/	36 Windows with Inbuilt Push Button and Watchdog LED.
IP 36 WOPB	36 Windows without Inbuilt Push Button and Watchdog LED.
IP 48 WOPB	48 Windows without Inbuilt Push Button and Watchdog LED.
IP48 WPB/	48 Windows with Inbuilt Push Button and Watchdog LED.

OPTIONAL

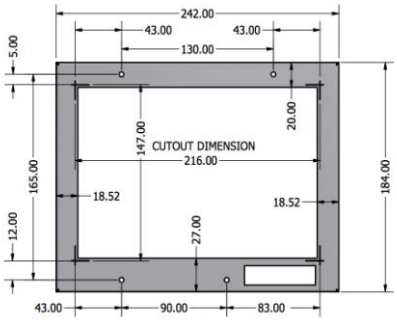
Model IP	The First number indicates the numbers of Active Window.
12 WPB	12 Windows With Inbuilt Push Button and Watchdog.
16 WOPB	16 Windows Without Inbuilt Push Button Watchdog.
/ WOSS	Without Selector Switch.
/ BB	With In Built Buzzer.
/ RR	With Repeat Relay Facilities.
/ WG	With Grouping Selection Dip Switch. (R 1 & R 2)
/ IO	With IO Selection Dip Switch.



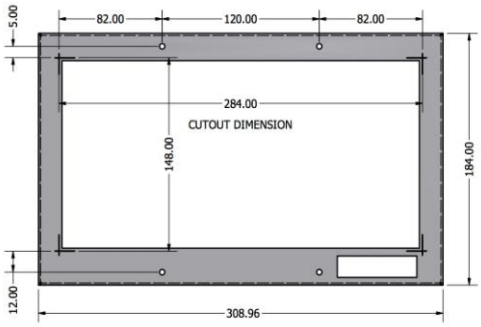
Model 12 Active Windows



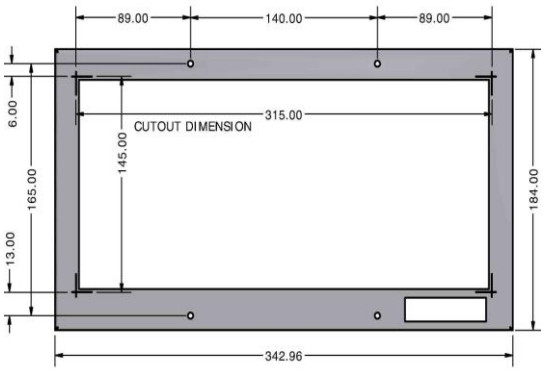
Model 16 Active Windows



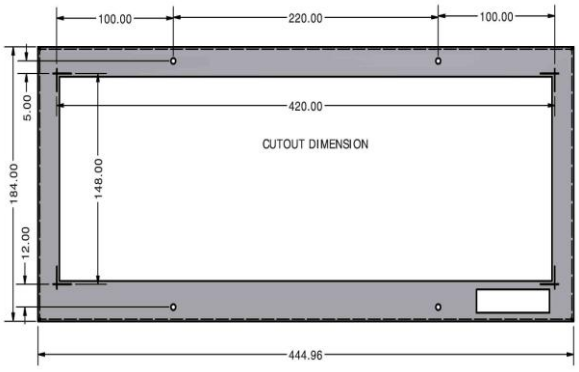
Model 24 Active Windows



Model 32 Active Windows



Model 36 Active Windows



Model 48 Active Windows

Numbers of Windows	Overall Dimension Height (H) x Width (W) x Depth (D) mm	Cut out Dimension Height (H) x Width (W) mm
12	184.0 x 140.0 x 200 (mm)	150 x 111(mm)
16	184.0 x 174.0 x 200	150 x 148.0
24	184.0 x 242.0 x 200	150 x 216.0
32	184.0 x 308.96 x 200	150 x 248.0
36	184.0 x 342.96 x 200	150 x 315.0
48	184.0 x 444.96 x 200	150 x 420.0

Due to our consistence research and development it

TECHNICAL SPECIFICATION

Supply Voltage
- Wide Band Dual Voltage AC / DC
- 90 – 270V AC/DC +10% - 15%
- 24 – 60V AC/DC +10% - 15%

Frequency
- 50/60 Hz

Power Consumption
- Sleep Mode @ 240V AC 53 mA
- Sleep Mode @ 110V DC 100 mA
- 5.6 - 8.6mA per illuminated window

Operating Sequence
- Three Sequences are provided by selecting DIP switch. Site Selectable. One sequence operated at time. (M1-Manual Reset, A1- Auto Reset & F2-1- First Up)

Illumination
- Ultra bright dual LEDS (Replaceable LEDs mounted on PCB)

Input Signal
- Potential Free Contact

Output
- Interrogation Voltage : +12V DC
- Annunciation Failure Relay : OPTO Isolated
- Electromagnetic Relay : NO/NC 1 Contact
- Alarm Relay : OPTO Isolated Electromagnetic Relay (NO)
- Contact Rating : 5A, 240 VAC (Resistive)
- Repeat Relay : 1 Potential Free Contact for each alarm point using 25 Pin “D” Connector (Optional)

Isolation
- OPTO Coupler with filter protection against surge 2kV, 60Hz, 1 min in compliance IEC 255.4

Surge Immunity
- IEC 61000-4-5:1995

Relative Humidity
- 0 to 95% RH condensation

Storage Temperature
- - 20 to 80 Celsius -

Optional Features
- NO/NC Input Configuration Selection.
- Grouping Relay 1 and 2 (Trip / Untrip)
- Non Standard Operation Sequence.
- Repeat Relay for parallel annunciation.
- Push Button built-in Buzzer (4 kHz at 90dB, 10cm) with Watchdog Green LED.
- Additional contact.

Push Button Capsule
- Membrane type with Watchdog Green LED.
- Control Push Buttons for Test, Mute, Acknowledge and Reset function.

Window Color
- White, Red, Yellow, Blue, Green and Amber

Window Size
- 32 x 32mm. (Individual Replaceable)

Legends
- Laser printed on film / Tracing paper. Low relief engraving.

Inscription
- 5 lines, 4mm letter size with 55 Alphabets

Flash Rate
- Fast : 60 Flash per min.
- Slow : 30 Flash per min.

Response Time
- 15msec +/- 10msec

Control
- Attended / Unattended
- Annunciation Failure Contact

Compliance Immunity
- IEC 60255-5:2000
- IEC 60068-2-31:1982
- IEC 60068-2-32:1982
- IEC 60068-2-38:2009

Protection Class
- Facia (Window) : IP 41
- Enclosure : IP 30

Operating Temperature
- -20 to 60 Celsius

is our commitment to improve our product prior Notice.

INDUSTRIAL DESIGN PATENT PENDING